Center Independent Research & Development: GSFC IRAD

Laser Source for LiDAR Instrument (GSFC IRAD)

Completed Technology Project (2016 - 2018)

Project Introduction

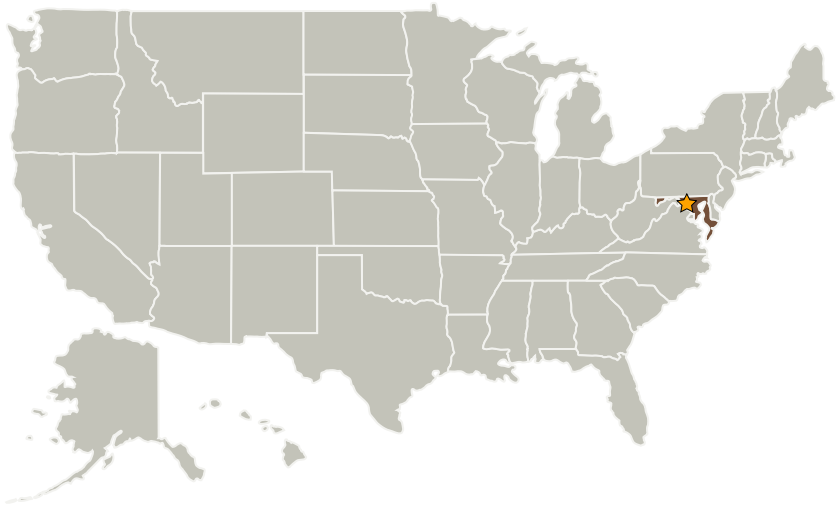
This IRAD project continues the work begun under an FY2017 IRAD award for a laser source based on photonic crystal. Successfully developing key subsystems will be a critical step toward a viable LiDAR instrument that would provide the ability to obtain signatures of numerous species.

For this FY2018, we propose to continue work on the laser source.

Anticipated Benefits

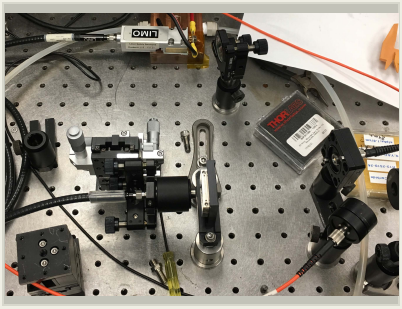
This is an enabling technology that is needed to realize the goal of a laser ranging instrument that will have applications in Planetary exploration.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations
Maryland



Experiment set up

Table of Contents

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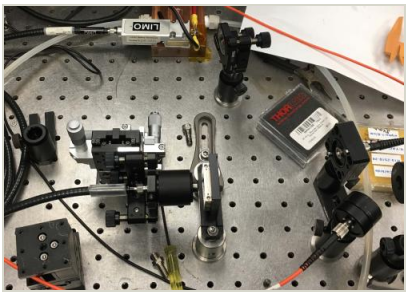
Images



Microchip Laser
Experiment set up
(https://techport.nasa.gov/image/32106)

Project Website:

http://sciences.gsfc.nasa.gov/sed/

Organizational Responsibility

Responsible Mission Directorate:

Mission Support Directorate (MSD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Center Independent Research & Development: GSFC IRAD

Project Management

Program Manager:

Peter M Hughes

Project Managers:

Brook Lakew
Michael J Amato

Principal Investigator:

George B Shaw

Co-Investigator:

Frankie Micalizzi

Laser Source for LiDAR Instrument (GSFC IRAD)

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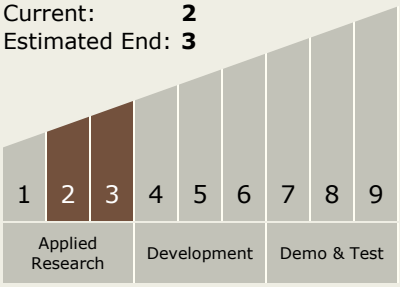
Technology Maturity (TRL)

Start: **2**
Current: **2**
Estimated End: **3**



Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers

Target Destination

Others Inside the Solar System